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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,261	03/10/2004	Theodore D. Rees	ELAN-01110US2	5359

23910 7590 04/05/2007
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EXAMINER

ALUNKAL, THOMAS D

ART UNIT	PAPER NUMBER
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2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/797,261	Applicant(s) REES ET AL.	
	Examiner Thomas D. Alunkal	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments, filed 1/2/07, with respect to the rejection(s) of claim(s) 1-11 under **35 USC § 112** and **35 USC § 103** have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelly et al (hereafter Kelly)(US PgPub 2002/0114244).

Regarding claim 1, Kelly discloses a laser driver integrated circuit (LDIC) to drive a laser diode that is located on an optical pick-up unit (OPU) with the LDIC (Figure 9A, Elements 260 and 142), the LDIC including: an automatic power controller (APC) to control an output of the laser diode to compensate for changes in characteristics of the laser diode (Figure 9A, Element 260 and Paragraph 60), a running optical power controller (ROPC) to control the output of the laser diode to compensate for variations in

an optical media (Figure 8, ROPC 1,2,3. Signals from the EFM-Encoder are transmitted to the APC, which represents both the APC and ROPC of the present invention), a write strategy generator (WSG) to implement write strategies (Figure 8, Element 232), wherein the APC and ROPC include an offset, gain and sample and hold circuitry (Figure 9, Elements 310, 330, 340, and 360) thereby reducing an amount of analog signals to be sent over a flex cable between the OPU and a main board (Figure 9A, Element 120 and Paragraphs 47-48). Kelly does not disclose wherein the APC and ROPC each include their own dedicated offset, gain, and sample and hold circuitry. Rather, Kelly discloses one set, which is shared between both the APC and ROPC, of offset, gain, and sample and hold circuitry.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a second offset, gain, and sample and hold circuitry to the LDIC disclosed by Kelly, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding claim 2, Kelly discloses wherein the APC is adapted to receive power control signals over the flex cable that connects the OPU with a controller on the main board, and where the LDIC determines a current for which to drive the laser diode, based at least in part on the power control signal (Paragraph 62. Specifically, Microprocessor 120 sends power controls signals to the APC via the EFM encoder).

Regarding claim 3, Kelly discloses wherein the APC and ROPC are used by the LDIC to determine the current for which to drive the laser diodes (Paragraph 86).

Regarding claim 4, Kelly discloses a chip-set to be located on an optical pick-up unit (OPU) that can communicate with components on a main board over a flex cable (Paragraph 70 where circuit board corresponds to a chip-set), a laser driver integrated circuit (LDIC) adapted to drive a laser diode (Figure 9A, Elements 260 and 142), the LDIC including an automatic power controller (APC) (Figure 9, Element 260), a running optical power controller (ROPC) (Figure 8, ROPC 1,2,3. Signals from the EFM-Encoder are transmitted to the APC, which represents both the APC and ROPC of the present invention), a power monitor integrated circuit (PMIC) to monitor the laser diode (Figure 7, Element 192), a photo-detector integrated circuit (PDIC) to detect light produced by the laser diode after the light has been reflected from an optical media (Figure 9A, Element 304), the PDIC including its own dedicated offset, gain and sample and hold circuitry (Figure 9A, Elements 310, 330, 340, and 360). Kelly does not disclose wherein the PMIC includes its own dedicated offset, gain and sample and hold circuitry. Rather, the circuits contained within the APC share one set of offset, gain and sample and hold circuitry.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a second offset, gain, and sample and hold circuitry to the LDIC disclosed by Kelly, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding claim 5, Kelly discloses wherein the LDIC further comprises a write strategy generator (WSG) to implement write strategies (Figure 8, Element 232).

Regarding claim 6, Kelly discloses wherein the WSG implements write strategies by controlling the offset, gain and sample and hold circuit of the PMIC and the PDIC, without requiring communications over the flex cable (Paragraph 86. Specifically, implementing write strategy comes from the EFM encoder without communication over a flex cable).

Regarding claim 7, Kelly discloses wherein the offset, gain and sample and hold circuitry of the PMIC and the PDIC are controlled by a write strategy generator (WSG) located on the main board (Paragraph 70. Specifically, the EFM encoder, which includes the WSG, can be positioned on the main board).

Regarding claim 8, Kelly discloses wherein the automatic power controller (APC) controls an output of the laser diode to compensate for changes in characteristics of the laser diode (Figure 9A, Element 260 and Paragraph 60), the running optical power controller (ROPC) controls the output of the laser diode to compensate for variations in an optical media (Figure 8, ROPC 1,2,3. Signals from the EFM-Encoder are transmitted to the APC, which represents both the APC and ROPC of the present invention).

Regarding claim 9, Kelly discloses wherein the APC receives power control signals over the flex cable, and wherein the LDIC determines a current for which to driver the laser diode, based at least in part on the power control signal (Paragraph 62. Specifically, Microprocessor 120 sends power controls signals to the APC via the EFM encoder).

Regarding claim 10, Kelly discloses wherein the APC and ROPC are used by the LDIC to determine the current for which to drive the laser diodes (Paragraph 86).

Regarding claim 11, Kelly discloses a laser driver integrated circuit (LDIC) to drive a laser diode that is located on an optical pick-up unit (OPU) with the LDIC (Figure 9A, Elements 260 and 142), the LDIC including: an automatic power controller (APC) to control an output of the laser diode to compensate for changes in characteristics of the laser diode (Figure 9A, Element 260 and Paragraph 60), a running optical power controller (ROPC) to control the output of the laser diode to compensate for variations in an optical media (Figure 8, ROPC 1,2,3. Signals from the EFM-Encoder are transmitted to the APC, which represents both the APC and ROPC of the present invention), wherein the APC and ROPC include an offset, gain and sample and hold circuitry (Figure 9, Elements 310, 330, 340, and 360) thereby reducing an amount of analog signals to be sent over a flex cable between the OPU and a main board (Figure 9A, Element 120 and Paragraphs 47-48). Kelly does not disclose wherein the APC and ROPC each include their own dedicated offset, gain, and sample and hold circuitry. Rather, Kelly discloses one set, which is shared between both the APC and ROPC, of offset, gain, and sample and hold circuitry.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a second offset, gain, and sample and hold circuitry to the LDIC disclosed by Kelly, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shimoda et al. (US 6,442,115) disclose an information recording apparatus with APC and a WSG.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Alunkal whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thomas Alunkal


WAYNE YOUNG
SUPERVISORY PATENT EXAMINER